

Christian County Water District

KY-0240521

Water Quality Report for year 2014

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Meeting Dates and Time:	1st Thursday Each Month	Phone:	(270) 886-3696
	@ 7:00 P.M.	We now accept major credit cards and payment on-line @ www.ccwd.net	

This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product. Water is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system.

During 2014 the Christian County Water District purchased water from two sources. Customers who live in the Gracey area, Hwy.68, Hwy.117, Hwy.272, Hwy.164, and all side roads in these areas were supplied with water purchased from Barkley Lake Water District which is treated surface water drawn from Barkley Lake. All other customers in Christian County were supplied with water purchased from Hopkinsville Water Environment Authority (HWEA). HWEA has treated surface water which is drawn from Barkley Lake, the North Quarry and the South Quarry. An assessment of the source water indicates that there are fifty-three potential contaminant sites located within the watershed. Sources of high potential impact include underground and above ground storage tank facilities, hazardous materials transfer and storage, and landfills. Sources of moderate to low potential impact include those from agricultural operations, an inactive rock quarry, and failing septic systems. The complete Susceptibility Analysis Report is available at the Pennyriple Area Development District on Hammond Drive in Hopkinsville. For more information, please call (270) 886-9484.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from storm water runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (Stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Some or all of these definitions may be found in this report:

Maximum Contaminant Level (MCL) – the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) – the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) – the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) – the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Below Detection Levels (BDL) – laboratory analysis indicates that the contaminant is not present.

Not Applicable (N/A) – does not apply

Parts Per Million (ppm) – or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts Per Billion (ppb) – or micrograms per liter, (ug/l). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts Per Trillion (ppt) – one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts Per Quadrillion (ppq) – one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries Per Liter (pCi/l) – a measure of the radioactivity in water.

Millirems Per Year (mrem/yr.) – a measure of radiation absorbed by the body.

Million Fibers Per Liter (MFL) – a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) – a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variances & Exemptions (V&E) – State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (AL) – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

Treatment Technique (TT) a required process intended to reduce the level of a contaminant in drinking water.

Information About Lead:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Your local public water system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Spanish (Espanol) Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

2014 Test Results

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Unless otherwise noted, the report level is the highest level detected.

Source A = Hopkinsville Water Environment Authority Source B = Barkley Lake Water District
Source C = Christian County Water District

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*	A=	0.21	100	No	Soil runoff
* Representative samples of filtered water	Less than 0.3 NTU in 95% monthly	B=	0.22	100	No	

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
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Microbiological Contaminants

Total Coliform Bacteria	5%	0	A=	2%	N/A	Sept 14	No	Naturally in the environment
# or % positive samples	1		C=	1	N/A	June & Aug 14	No	

Radioactive Contaminants

Alpha emitters	15	0	A=	0.2	0.2 to 0.2	Jul-08	No	
	15	0	B=	4.70	4.7 to 4.7	Jul-14	No	Erosion of natural deposit
Barium [1010]	2	2	A=	0.043	0.043 to 0.043	Jan-14	No	Drilling wastes; metal refineries
	2	2	B=	0.020	0.020 to 0.020	Aug-14	No	Erosion of natural deposits

Inorganic Contaminants

Arsenic [1005] (ppm)	10	N/A	A=	1.2	1.2 to 1.2	Jan 2014	No	Erosion of natural deposits: runoff from orchards:runoff glass& electronics wastes
	10	N/A	B=	0.6	0.6 to 1.2	Aug2014	No	
Copper [1022] (ppm)	AL=	1.3	A=	0.096	ND to 0.114	Jul-Sep 12	No	
Sites exceeding action household	1.3		B=	0.286	0.0 to 0.425	Oct 14	No	
			C=	0.234 (90th percentile)	0.001 to 0.632	Jul-Sep 12	No	Corrosion of plumbing systems
Fluoride [1025] (ppm)	4	4	A=	0.3	0.30 to 0.3	Jan 2013	No	Water additive which promotes strong teeth
			B=	1.00	0.83 to 1.12	Jan -14	No	
Lead [1030] (ppb)	AL=	0	A=	4.8	ND to 8.7	Jul/Sep12	No	
Sites exceeding action Level 1	15		B=	0	0 to 3	Oct-14	No	Corrosion of household plumbing systems
			C=	5 (90th percentile)	2 to 7	Jul-Sep12	No	
Nitrate (1040)	10	10	B=	0.5.00	0.04 to 0.5	Feb2014	No	Leaching from septic tank
Selenium (ppb)	0.05	0.05	B=	1.2	0 to 1.2	Aug2014	No	Discharge from petroleum& refineries:erosion of natural deposit:discharge from mine

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2014 Test Results (Continued)

Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A= B=	1.37 1.61	0.52 to 2.22 1.07 to 2.48	N/A N/A	No No	Naturally present in environment
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*Monthly ratio is the %TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance

Chlorine (ppm)	MRDL =4	MRDLG =4	A= B= C=	1.37 1.40 1.22	0.22 to 2.43 0.6 to 14 0.56 to 2.44	N/A N/A N/A	No No No	Water additive used to control microbes
HAA (ppb) (all sites) (Haloacetic acids)	60	N/A	A= B=	55 37 (average)	40 to 83 24 to 47 (range of system sites)	1 (per quarter) N/A	No No	No Byproducts of drinking No water disinfection
HAA (ppb) [Haloacetic acids] (individual sites)	60	N/A	B=	39 (locational average)	24 to 47 (range of individual sites)	N/A	No	
TTHM (ppb) (all sites) [total trihalomethanes]	80	N/A	A= B=	55 42 (average)	33 to 84 26 to 56	1 (per quarter) N/A	No No	Byproduct of drinking water disinfection
TTHM (ppb) [total trihalomethanes] (individual sites)	80	N/A	B=	45.5 (locational average)	26 to 56	N/A	No	Byproduct of drinking water disinfection
Haloacetic acids or HAA (ppb) Stage two	60	N/A	A C	44 43 locational running annual average	21-53 30-54	1 per quarter	No No	By-product of drinking water disinfection
Total Trihalomethanes or TTHM (ppb) Stage Two	80	N/A	A C	76 47 locational running annual average	21-113 29-76	1 per quarter	No No	By-product of drinking water disinfection

UNREGULATED CONTAMINANTS (UCMR3)

Parameter		Average	Range	Date
Vanadium (ppb)	A C1 C2	0.66 0.46 0.40	0.62— 0.70 0.38—0.68 <0.2—0.77	10/2014 ALL 4 Qtr ALL 4 Qtr
Molybdenum (ppb)	A	1.41	1.36— 1.45	10/2014
Strontium (ppb)	A C1 C2	398.0 194.6 520.5	395—401 131—299 252-877	10/2014 ALL 4 Qtr ALL 4 Qtr
Chromium-6 (ppb)	A C1 C2	0.08 0.11 0.14	0.05—0.11 <0.03-0.28 0.054-0.28	10/2014 ALL 4 Qtr ALL 4 Qtr
Chromium (ppb)	A C1 C2	0.28 0.26 0.29	0.3—0.27 <0.2-0.49 0.22—0.41	10/2014 ALL 4 Qtr ALL 4 Qtr

Source A = Hopkinsville Environment Authority Source C1 = Christian County Water District / Barkley Lake Water Source C2 = Christian County Water District / Hopkinsville Environment Authority

The water samples were taken by Christian County Water District during the last three quarters of 2014 and the fourth sampling was taken the first quarter of 2015. All analytical results are completed and final for the UCMR3.

Our water system has sampled for a series Unregulated Contaminants. Unregulated Contaminants are those that don't yet have a drinking water standard set by EPA. The EPA has asked us to submit these samples to decide whether the contaminants should have a standard. As our customer, you have a right to know that this data is available. If you are interested in examining the results, please contact our office during normal business hours.